# Cable Free Weather Station with Thermo-Hygrometer and Radio controlled clock

*MODEL: BAR938HGA*

## USER'S MANUAL

## INTRODUCTION

Congratulations on your purchasing of BAR938HGA Cable Free Weather Station with Thermo-Hygrometer and Radio controlled clock.

RF- controlled, BAR938HGA can automatically synchronize its current time and date when it is brought within range of the radio signal generated from the U.S. Atomic Clock.

BAR938HGA does weather forecasts with kinetic-movement graphic illustrations and tells indoor and outdoor temperature. It also shows the trend of changes plus the recorded maximum and minimum temperatures.

Apart from temperature, BAR938HGA shows the indoor and outdoor relative humidity and rates the comfort level. It also stores in memory the maximum and minimum relative humidity readings. A remote thermo-hygro sensor is included with the unit. BAR938HGA is able to receive and display readings from up to 3 remote sensors.

The built-in barometer enables BAR938HGA to display the atmospheric pressure with user-selectable altitude adjustment. A bar graph will show the pressure trend of the last 24 hours.

What is more, BAR938HGA is equipped with a moon phase scanner, which lets you check the moon phase of any day between 1990 and 2019.

Other features include a HiGlo backlight, daily alarm and extra-large display.

No wire installation is required between the main and remote units. As BAR938HGA operates at 433MHz, it can be used in the U.S. and most places in Continental Europe. However, the Atomic Clock function of the BAR938HGA is pertinent to the U.S. only.

## MAIN FEATURES: MAIN UNIT

**A   RADIO RECEPTION SIGNAL**
Indicates the condition of radio reception

**B   LIGHT BUTTON**
Turns on the backlight for five seconds

**C   CLOCK WINDOW**
Displays the current time and date

**D   ALARM ON ICON**
Appears when the alarm is activated

**E   ALARM ICON**
Appears when the alarm time is displayed

**F   MAIN UNIT BATTERY LOW ( ⇨ ) INDICATOR**
Lights up and blinks when the batteries of the main unit are running dry

**G   REMOTE UNIT BATTERY LOW ( ⇨ ) INDICATOR**
Lights up when the batteries of the remote unit are running dry
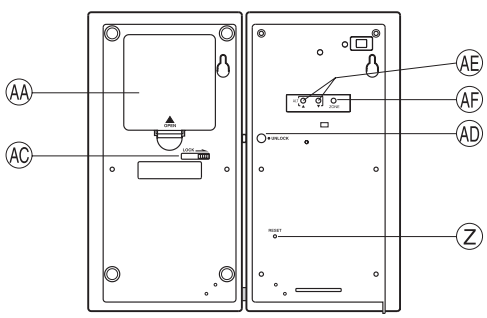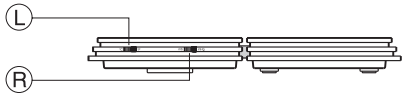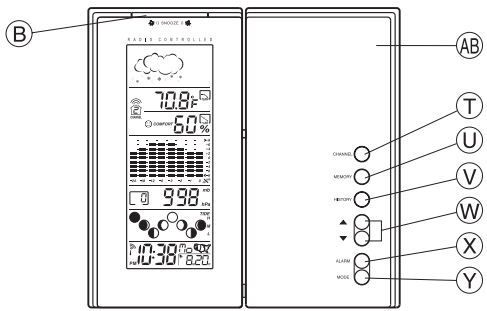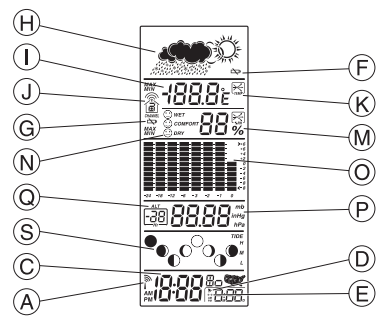
**H   WEATHER FORECAST WINDOW**
Graphically displays weather forecast

**I   TEMPERATURE WINDOW**
Shows the current temperature or the maximum or minimum recorded temperature

**J   IN/OUT - REMOTE INDICATOR**
Indicates if the current reading is displayed as indoor or outdoor-remote

**K TEMPERATURE TREND ARROWS**
Indicates the trend of temperature changes

**L °C/°F SLIDE SWITCH**
Selects between Centigrade (°C) and Fahrenheit (°F) display

**M RELATIVE HUMIDITY WINDOW**
Displays the relative humidity

**N COMFORT LEVEL INDICATOR**
Icons display the comfort level

**O BAROMETRIC PRESSURE CHART**
Shows the barometric pressure trend chart for the last 24 hours

**P BAROMETRIC PRESSURE WINDOW**
Displays the current barometric pressure

**Q PRESSURE HISTORY INDICATOR**
Indicates the pressure history of previous hours

**R PRESSURE UNIT SLIDE SWITCH**
Selects between mb/hPa and inHg display

**S MOON PHASE SCANNER**
Graphically illustrates the current moon phase or for other specified dates.

**T CHANNEL BUTTON**
Selects among indoor & channel 1, 2, 3 or to enter auto scan mode

**U MEMORY BUTTON**
Displays the maximum or minimum temperature and relative humidity or erases the memory

**V HISTORY BUTTON**
Selects the pressure history of previous hours

**W UP(▲) AND DOWN(▼) BUTTONS**
Increases or decreases the value of a setting and scan the moonphase status

**X ALARM BUTTON**
Displays the alarm time

**Y MODE BUTTON**
Triggers the clock setting mode

**Z RESET BUTTON**
Resets the unit by returning all settings to their default values

**AA BATTERY COMPARTMENT**
Accommodates four UM3 or AA-size batteries

**AB TABLE AND CONTROL STAND**
Acts as control panel and supports the unit when lying flat.

**AC LOCK SLIDE BUTTON**
Slide to the right to lock the 2 panels

**AD UNLOCK BUTTON**
Press to release the lock

**AE ALT UP (▲) AND ALT (▼) BUTTONS**
Increases or decreases the value in compensational altitude setting

**AF ZONE BUTTON**
Toggles among the 4 U.S. time-zones: Pacific, Mountain, Central or Eastern

## MAIN FEATURES: REMOTE UNIT MODEL THGR238N
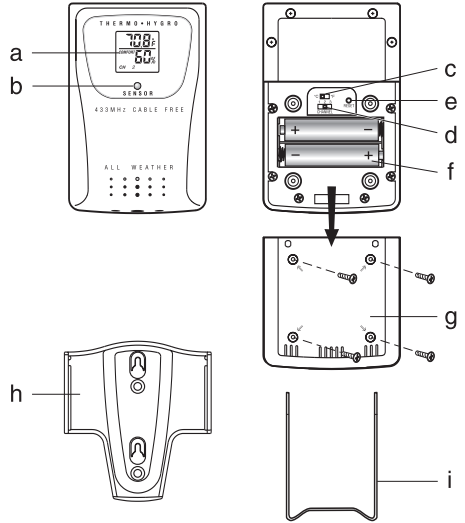


**a Two-line LCD**
Displays the current temperature and humidity monitored by the remote unit

**b LED indicator**
Flashes when the remote unit transmits a reading

**c °C/°F slide switch**
Selects between Centigrade (°C) and Fahrenheit (°F)

**d Channel slide switch**
Designates the remote unit Channel 1, Channel 2 or Channel 3

**e RESET**
Returns all settings to default values

**f Battery compartment**
Accommodates two AA-size batteries

**g Battery door**

**h Wall-mount holder**
Supports the remote unit in wall-mounting

**i Removable table stand**
For standing the remote unit on a flat surface

## BEFORE YOU BEGIN

For best operation,

1. Insert batteries for remote units before doing so for the main unit.

2. Position the remote unit and main unit within effective transmission range, which, in usual circumstances, is 100 feet.

Though the remote unit is weather resistant, it should be placed away from direct sunlight, rain or snow.

# BATTERY AND CHANNEL INSTALLATION: REMOTE UNIT

The remote thermo-hygro sensor unit uses two (2) UM-3 or "AA" size alkaline batteries.

**Follow these steps to install / replace batteries:**

1. Remove the screws on the battery compartment.

2. Select the channel number on the **CHANNEL** slide switch.

3. Select the temperature display unit on the °**C**/°**F** slide switch.
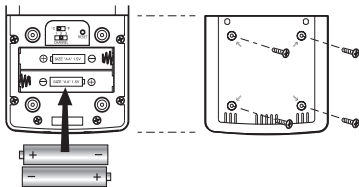


4. Insert the batteries strictly according to the polarities shown therein.

5. Replace the battery compartment door and secure its screws.

Replace the batteries when the low-battery indicator of the particular channel lights up on the main unit. (Repeat the steps described in section "BEFORE YOU BEGIN")

*Note that once a channel is assigned to a remote unit, you can only change it by removing the batteries or resetting the unit.*

# BATTERY INSTALLATION: MAIN UNIT

1. Gently press and lift the tab on the battery compartment door.

2. Insert four UM3 or AA-size batteries.
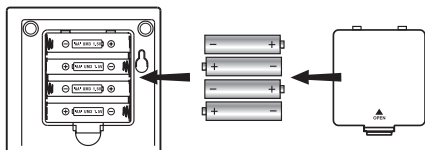


3. Replace the battery compartment door.

Replace the batteries when the low battery indicator [ ] on the weather forecast window lights up.

# HOW TO USE THE BACKLIGHT

Press the **LIGHT** button once. The backlight will be turned on for five seconds.

# TIME DISPLAY MODES

The current time and date can be displayed. To toggle among the 4 U.S. time-zones, press the **ZONE** button.



Pressing the **ALARM** button will display the daily alarm time. To go back to normal time and date display, press **MODE**.

# ABOUT RADIO RECEPTION

BAR938HGA is designed to automatically synchronize its calendar clock once it is brought within range of the U.S. Atomic Clock radio signal. It will scan and adjust every full hour. When the unit is new and just out of the box, synchronization with the U.S. Atomic Clock can take up to 72 hours.

When the unit is receiving radio signal, the RADIO RECEPTION indication will start to blink. A complete reception generally takes about 2 to 10 minutes, depending on the strength of the radio signal.

When the reception is complete, the RADIO RECEPTION indication will stop blinking. If the signal is received, a RADIO RECEPTION indication [ ] will be shown. Otherwise, [ ] is displayed.

For better reception, place the clock away from metal objects and electrical appliances to minimize interference.

Should you wish to deactivate the RF controlled function, press and hold **UP** and **DOWN** button simultaneously.

To reactivate the RF control function, from its deactivated status press and hold **UP** and **DOWN** simultaneously.

| | |
|---|---|
| | - Good |
| | - No signal |
| | - Receiving |

# HOW TO SET THE CLOCK AND CALENDAR MANUALLY

When the current time is displayed, press and hold **MODE** for three seconds. The year digits will flash. Use the **UP** or **DOWN** button to select. Holding down either button will increase or decrease the value rapidly.

Press **MODE**. The month digits will flash. Use the **UP** or **DOWN** buttons to select. Press **MODE** to set the day. Repeat the steps to set hour and minute. Press **MODE** to confirm.

If changes are made during minute-setting, the seconds will clear to zero and stop.

# HOW TO SET AND ACTIVATE THE DAILY ALARM

When the daily alarm time is displayed, press and hold **ALARM** for three seconds.

Enter the value for the hour digits by the **UP** or **DOWN** button. Press **ALARM** to confirm and go to the minute digits. Enter the value and press **ALARM** to confirm.

The alarm is automatically activated and **[ ➤ ]** will be displayed. To deactivate it, press **ALARM** once in the alarm display mode.

When the alarm is active, it will go off at the set time. The display will light up for five seconds with the **[ ➤ ]** icon flashing. Without interruption, the alarm will go off for 1 minute.

To stop the alarm, press [**ALARM**], [**MODE**], [**LIGHT**], [ ▲ ], [ ▼ ] or [**ZONE**] button.

# HOW TO CHECK INDOOR AND OUTDOOR-REMOTE TEMPERATURES & HUMIDITIES

To display indoor temperatures and humidities, press the **CHANNEL** button until the [ ⌂ ] indicator lights up.

To display outdoor-remote temperatures and humidities, press the **CHANNEL** button to scroll through the readings from up to 3 remote sensors.

The temperature can be shown in Centigrade (°C) or Fahrenheit (°F). The unit is selected on the °C / °F slide switch.

If the readings go above or below the specified range, the display will show flashing "HHH" or "LLL".

# CHANNEL SCAN FUNCTION

Press and hold **CHANNEL** button for 3 seconds to enter channel scan function. The readings of each channel will be displayed automatically, one by one, for 4 seconds. Press **CHANNEL** again to stop the scan function.

# NOTE ON REMOTE TEMPERATURE & HUMIDITY

Once batteries are in place for the remote unit, it will start transmitting samplings at 39-43-second intervals.

If no signals are received when the remote temperature and humidity is selected, blanks will be displayed. Press and hold the **CHANNEL** and **MEMORY** buttons together to enforce a search. This is useful in synchronizing the transmission and reception of the remote and main units.

If that fails, check if the remote unit is still in place. Make sure the transmission is within range and path is clear of obstacles and interference.

Repeat this procedure whenever you find discrepancies between the reading shown on the main unit and the remote unit.

# NOTE ON °C AND °F

The outdoor temperature display on the main unit is dominated by the selection on the °**C**/°**F** slide switch of the main unit. Whatever the display unit of the remote sensor is, it will only apply to the remote sensor. The temperature display on the main unit will be automatically converted to the chosen one on the main unit.

# MAXIMUM AND MINIMUM TEMPERATURES & HUMIDITY

The maximum and minimum recorded temperatures and humidity will be automatically stored in memory. To display them, press **MEMORY** to toggle among the maximum, minimum and current temperatures and humidity. The respective MAX or MIN indicator will be displayed.

To clear the memory, hold down **MEMORY** for three seconds. The maximum and minimum temperatures and humidity will be erased. If you press **MEMORY** now, the maximum and minimum temperatures and humidities will have the same values as the current one until different readings are recorded.

# TEMPERATURE AND HUMIDITY TREND

The temperature trend and humidity trend indicators show the trend of collected readings. Three trends rising, steady and falling, will be shown.

| Arrow indicator | ↗ TEMP | → TEMP | ↘ TEMP |
|---|---|---|---|
| Temperature Trend | Rising | Steady | Falling |

| Arrow indicator | ↗ %RH | → %RH | ↘ %RH |
|---|---|---|---|
| Humidity Trend | Rising | Steady | Falling |

# WEATHER FORECAST

BAR938HGA is capable of detecting barometric pressure changes, and based on the data collected, can predict the weather for the next 12 to 24 hours. The effective range covers an area of 18 to 30 miles.

| sunny | partly cloudy | cloudy | rainy | snowy |
|---|---|---|---|---|

*NOTE:*

1. *The accuracy of a general pressure-based weather forecast is about 70 to 75%, and therefore, we cannot be held responsible for any inconveniences so caused by an inaccurate one.*

2. *The weather forecast is meant for the next 12 to 24 hours. It may not necessarily reflect the current situation.*

3. *The "Sunny" forecast covering night hours indicates clear weather.*

## COMFORT LEVEL INDICATORS

The comfort level indicators COMFORT, WET or DRY will tell you if the curent environment is comfortable, too wet or too dry.

The comfort indicators will appear on the display of the main unit when the following conditions are satisfied:

| Indicator displays on the unit | Temperature Range | Humidity Range | Shows that the Current Environment |
|---|---|---|---|
| ☺ COMFORT | 20°C to 25°C (68°F to 77°F) | 40%RH-70%RH | Ideal range for both relative humidity and temperature |
| ☺ WET | -5°C -+ 50°C (23°F - 122°F) | OVER-70%RH | Contains excess moisture |
| ☹ DRY | -5°C -+ 50°C (23°F - 122°F) | Below 40%RH | Contains inadequate moisture |
| No Indicator | Less than 20°C( 68°F) or More than 25°C (77°F) | 40%RH to 70%RH | No comment |

## HOW TO CHECK THE BAROMETRIC PRESSURE

The current and historical barometric pressure is shown on the atmospheric pressure window. For monitoring the Sea Level barometric pressure reading at certain altitude, the user needs to select the local altitude (-100 to 2500 meters i.e. -328 to 8223 feet) for the altitude setting. The BAR938HGA requires entry of elevation in meters not feet. Therefore, to convert feet to meters, multiply feet by 0.3048. To determine your location elevation, please either contact your local library, TV/ radio weather forecaster, or via Intenet at http://www.worldatlas.com/aatlas/infopage/elvation.htm. To enter the altitude compensation setting mode, press and hold **HISTORY** button. Use the **ALT UP** or **ALT DOWN** button to select from -100 to 2500 meters i.e. -328 to 8223 feet (whichever appropriate). Press **HISTORY** button to confirm and exit. If the altitude changes, the "ALT" icon will flash to indicate such change. It will stop flashing when the pressure reading is recorded again.

The atmospheric pressure can be displayed in mb/hPa or inHg. The pressure unit is selected on the atmospheric pressure slide switch inside the battery compartment.

If you want to check the pressure history for a particular hour during the past 24 hours, press the **HISTORY** button. Each press on the button will go back by an hour.

The recorded barometric changes for the past 24 hours are displayed in a bar chart above the barometric pressure window.
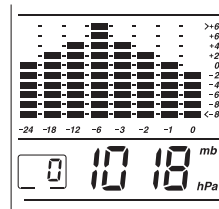


## HOW TO USE AND SCAN THE MOON PHASE

BAR938HGA is equipped with a moon phase display and scanner which displays the eight moon phases ( i.e. from new moon to waning crescent) on the screen. The phase which falls on the current day will apperar on the screen alone for five seconds. For example, if the currrent day is an exact full moon, the full moon icon will flash.

The eight phases are:
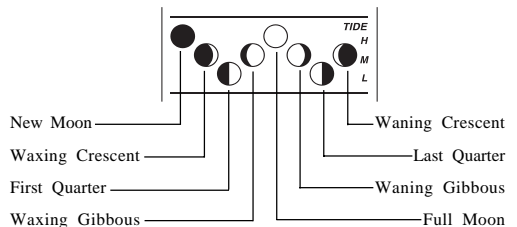


To check the moon phase for a particular day, press the **UP** or **DOWN** button once. The clock will enter moon phase scanning mode.

Use the **UP** or **DOWN** button to set the date you want to check.

You can go back in time or travel to the future, any day between the hundred years from 1990 to 2019. The corresponding moon phase will appear on the screen.

The unit will return to the last display mode when the **UP** and **DOWN** buttons are left idle for 10 to 15 seconds.

## HOW TO WALL MOUNT OR USE THE TABLE STAND

### Wall-mount

First, adjust the control panel and display panel so that they are parallel to each other. Press the sides of the display panel and control panel towards each other. Slide the **LOCK** button to the right to lock the 2 panels together. The unit can be wall-mounted using its recessed screw holes.
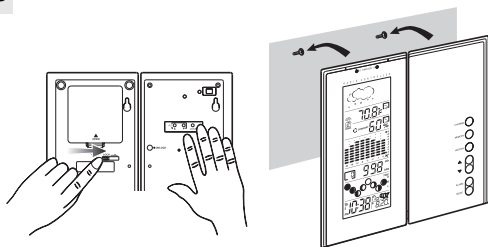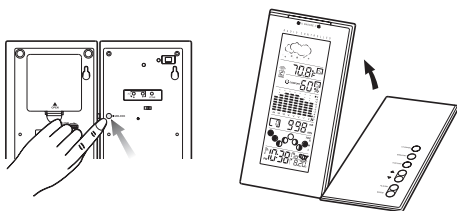
### Table-stand

First, unlock the two panels by pressing the unlock button. Lay the control panel on a flat surface. Then adjust the angle of the display panel for best display and support.



## HOW TO RESET THE UNIT

The **RESET** button allows you to return all settings to factory set values. The button is required only when the unit is not operating in a favorable way, such as in the rare case of a malfunction.

The **RESET** button is located at the back of the unit below the battery compartment. Press the button with a blunt stylus to reset all values to their default settings.

## MAINTENANCE

When handled properly, this unit is engineered to give you years of satisfactory service. Here are a few product care instructions:

1. Do not immerse the unit in water. If the unit comes in contact with water, dry it immediately with a soft lint-free cloth.

2. Do not clean the unit with abrasive or corrosive materials.Abrasive cleaning agents may scratch the plastic parts and corrode the electronic circuit.

3. Do not subject the unit to excessive: force, shock, dust, temperature, or humidity. Such treatment may result in malfunction, a shorter electronic life span, damaged batteries, or distorted parts.

4. Do not tamper with the unit's internal components. Doing so will terminate the unit's warranty and may cause damage. The unit contains no user-serviceable parts.

5. Only use new batteries as specified in this instruction manual. Do not mix new and old batteries as the old batteries may leak.

6. Read this instruction manual thoroughly before operating the unit.

## SPECIFICATIONS

• **Temperature Measurement**

*Main unit*

Indoor Temperature measurement

| | | |
|---|---|---|
| Proposed operating range | : | -5.0°C to +50.0°C (23.0°F to 122.0°F) |
| Temperature resolution | : | 0.1°C (0.2°F) |

Remote Temperature measurement

| | | |
|---|---|---|
| Proposed operating range | : | -5.0°C to +50.0°C (23.0°F to 122.0°F) |
| Temperature resolution | : | 0.1°C (0.2°F) |

Relative Humidity Measurement

| | | |
|---|---|---|
| Indoor relative humidity measurement range | : | 25% RH to 95% RH |
| Resolution | : | 1% RH |

*Remote unit*

| | | |
|---|---|---|
| Measuring range | : | -20.0°C to +60.0°C (-4.0°F to 140.0°F) |
| Temperature resolution | : | 0.1°C (0.2°F) |
| RF Transmission Frequency | : | 433 MHz |
| No. of Remote unit | : | up to 3 units |
| RF Transmission Range | : | Maximum 100 feet |
| Temperature sensing cycle | : | around 39 - 43 seconds |

• **Relative Humidity Measurement**

| | | |
|---|---|---|
| Remote relative humidity measurement range | : | 25%RH to 95%RH |
| Resolution | : | 1% RH |

• **Barometric Pressure Measurement**

| | | |
|---|---|---|
| Pressure measuring range | : | 795 to 1050 mb/ hPa (23.48 to 31.01 inHg) |
| Pressure sampling cycle | : | 15 minutes |

• **Moon Phase Functions**

| | | |
|---|---|---|
| Moon Phase Scanner Range | : | From 1990 to 2019 |

• **Radio Controlled Clock**

- Maintime set and synchronized by Radio Signal from the U.S. Atomic Clock

- User selectable 12 or 24h display with hh : mm ss

- Date Format : Month-Day

- 1-minute alarm

- **Power**

  | | | |
  |---|---|---|
  | Main unit | : | use 4 pcs UM-3 or "AA" 1.5V alkaline battery |
  | Remote sensing unit | : | use 2 pcs UM-3 or "AA" 1.5V alkaline battery |

- **Weight**

  | | | |
  |---|---|---|
  | Main unit | : | 10.79 ounces |
  | Remote sensing unit | : | 3.53 ounces |

- **Dimension**

  | | | |
  |---|---|---|
  | Main unit | : | 7.17 x 5.24 x 1.10 inches |
  | Remote sensing unit | : | 3.62 x 2.36 x .83 inches |

## NOTE ON COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operations.

**Warning**: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC:**

**NOTE**: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

☐ Reorient or relocate the receiving unit.

☐ Increase the separation between the equipment.

☐ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

☐ Consult the dealer of an experienced radio/TV technician for help.

Company Name : Oregon Scientific, Inc.

Address : 19861 SW 95th Place, Tualatin, Oregon 97062, USA

Telephone Number : (1)503-6398883

Name and model number of the product: Remote Thermo-Hygro BAR938HGA

## CUSTOMER ASSISTANCE

Should you require assistance regarding this product and its operation, please contact our customer care department at 800-853-8883 or via email at helpme@oscientific.com.

## WARRANTY

This product is warranted to be free of manufacturing defects for a period of 90 days from date of retail purchase. Defective product should be directed to the place of retail purchase for exchange.

Should this not be possible, contact our customer care department for assistance and a return material authorization. No returns may be made without a return authorization. Please retain your retail receipt as you may be asked to provide a copy of it for proof of date purchased.

This warranty does not cover product subjected to abuse, misuse, accidental damage or tampering.